

## REPORT ON MACHINERY.

No. 18285

Date of writing Report 26. 7. 1924 When handed in at Local Office 8-9-1924 Port of GREENOCK  
 No. in Survey held at Reg. Book. on the S/S "Farnworth" Date, First Survey 11th June, 1923. Last Survey 2nd September 1924  
 (Number of Visits 6)

Master Built at Glasgow By whom built Blythwood Steel Co. Ltd. 1907  
 Engines made at Greenock By whom made John & Knechtel & Co. Ltd. 603 when made 1924  
 Boilers made at auto By whom made auto when made 1924

Registered Horse Power Owners Port belonging to Newcastle

Nom. Horse Power as per Section 28 425 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 26" - 42" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft as per rule 14.557 as fitted 14.347 Material of screw shaft S  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight in the propeller boss Yes If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 60"  
 Dia. of Tunnel shaft as per rule 12.99 as fitted 13 Dia. of Crank shaft journals as per rule 3.683 as fitted 3.34 Dia. of Crank pin 13.34 Size of Crank webs 20 1/2 x 8 3/4 Dia. of thrust shaft under collars 13.34 Dia. of screw 17.9 Pitch of Screw 18.0 No. of Blades 4 State whether moveable No Total surface 100 ft<sup>2</sup>  
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 3 Sizes of Pumps (Ballm. 9+13.10+9.5+5+8+9) No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 2. 3" Stokehold- 1. 3 1/2 In Holds, &c. 2. 3" No. 1 2 3 1/2 No. 2 2 3 No. 4  
 No. of Bilge Injections 1 sizes 1 1/2 Connected to condenser, to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes 5"  
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible  
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line above  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes  
 What pipes are carried through the bunkers Bilge Suctions How are they protected Steel Casing  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes  
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from U.E.R. Platform

BOILERS, &c.—(Letter for record R) Manufacturers of Steel Tubes. Mannesmannröhrenwerke AG. Gusslo-Funk 3SB.

Total Heating Surface of Boilers 7167 ft<sup>2</sup> Is Forced Draft fitted No No. and Description of Boilers 3 Single Ended  
 Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 29. 5. 24 No. of Certificate 1654  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63.3 ft<sup>2</sup> No. and Description of Safety Valves to each boiler Double Spring Area of each valve 8.27 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 60" Mean dia. of boilers 16.0 Length 11.6 Material of shell plates S  
 Thickness 1 1/16" Range of tensile strength 28/32 Are the shell plates welded or flanged Descrip. of riveting: cir. seams DR  
 long. seams TR.D.B.S Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 1/4" Top of plates or width of butt straps 1.70/8"  
 Per centages of strength of longitudinal joint rivets: 85.85 plate 85.85 Working pressure of shell by rules 184 Size of manhole in shell 16 1/2 x 20 1/2  
 Size of compensating ring 32 x 36 x 1 1/2 No. and Description of Furnaces in each boiler 3 Bougafa Material S Outside diameter 4.2 1/4"  
 Length of plain part top Thickness of plates crown 3 1/8" bottom 3 1/8" Description of longitudinal joint welded No. of strengthening rings  
 Working pressure of furnace by the rules 183 Combustion chamber plates: Material S Thickness: Sides 1 1/16" Back 5/8" Top 1 1/16" Bottom 1 3/16"  
 Pitch of stays to ditto: Sides 9 3/4 x 8" Back 8 3/4 x 8 3/8" Top 9 1/4 x 9 3/8" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 181  
 Material of stays S Area at smallest part 1.73 Area supported by each stay 91.3 Working pressure by rules 190 End plates in steam space:  
 Material S Thickness 1 1/8" Pitch of stays 9 5/8 x 16 How are stays secured D.N.W. Working pressure by rules 185 Material of stays S  
 Area at smallest part 6.66 Area supported by each stay 313 Working pressure by rules 194 Material of Front plates at bottom S  
 Thickness 1 1/32 Material of Lower back plate S Thickness 25/32 Greatest pitch of stays 13 3/4 Working pressure of plate by rules 194  
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S Thickness: Front 1 1/32 Back 25/32 Mean pitch of stays 10 3/8  
 Pitch across wide water spaces 14 1/4 Working pressures by rules 187 Girders to Chamber tops: Material S Depth and thickness of girder at centre 10 5/8 x 7 1/8 Length as per rule 40.6 Distance apart 9 3/8 Number and pitch of stays in each 32 x 9 3/4  
 Working pressure by rules 181 Steam dome: description of joint to shell % of strength of joint  
 Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
 Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

UPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

IS A DONKEY BOILER FITTED?

NO

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 Connecting Rod both Anti for top end  
ditto for bottom end. 2 Main Bearing both 1. Set of Coupling both  
one set of Feed. Pumps. Gates 1 Set of Piston Rings, 2 Quantity of  
Anchored both ends. Iron of various sizes. Spare Propeller  
Shaft complete.

The foregoing is a correct description,  
FOR JOHN G. KINCAID & COY., LIMITED.

Robert Green

Secretary

Manufacturer.

Dates of Survey while building { During progress of work in shops - - (1923) June 11. Oct 18. 30. Nov: 7. 12. Dec: 5. 13. 17. 24. 27. (1924) Jan: 9. 11. 23. 30. Feb: 4. 13. 28. Mar: 6. 11. 24. 27.  
During erection on board vessel - - - Apr: 3. 9. 10. 16. 21. 22. 25. 30. May: 9. 21. 29. June: 3. 10. 17. 18. 19. 24. 30. July: 1. 15. 18. 22. 23. 24. 25. 29. 30. 31. Aug: 4. 6. 7. 11. 13. 19. 26. 29. 25. 27. Sept: 2.  
Total No. of visits 62.

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 10. 6. 24 Slides 19. 6. 24 Covers 10. 6. 24 Pistons 19. 6. 24 Rods 30. 6. 24

Connecting rods 30. 6. 24 Crank shaft 30. 6. 24 Thrust shaft 30. 6. 24 Tunnel shafts 30. 6. 24 Screw shaft 1. 7. 24 Propeller 30. 6. 24

Stern tube 19. 6. 24 Steam pipes tested 8. 8. 24 Engine and boiler seatings on 4th Rpt Engines holding down bolts 8. 8. 24

Completion of pumping arrangements 27. 8. 24 Boilers fixed 8. 8. 24 Engines tried under steam 2. 9. 24

Completion of fitting sea connections on 4th Rpt Stern tube on 4th Rpt Screw shaft and propeller 23. 7. 24

Main boiler safety valves adjusted 27. 8. 24 Thickness of adjusting washers P 3/8 S 23/64 S 3/8 P 3/8 P 23/32 S 5/16 Lloyd's WGM 7082

Material of Crank shaft S Identification Mark on Do. 7046 Lloyd's WGM Material of Thrust shaft S Identification Mark on Do. 7082

Material of Tunnel shafts S Identification Marks on Do. 703 Lloyd's WGM Material of Screw shafts S Identification Marks on Do. 7998

Material of Steam Pipes Copper (SD) Test pressure 360 lbs

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150° F. —

Have the requirements of Section 49 of the Rules been complied with —

Is this machinery duplicate of a previous case No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers have been built under special survey in accordance with the approved plans & the workmanship & material are of good quality. They have now been securely fitted on board, tried under steam & found satisfactory. The machinery is eligible in my opinion for the record of LMC 19-24

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 9.24. CL.

W. Gordon-Mitchell  
18/9/04

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : - : When applied for.  
Special ... £ 88 : 15 : 4-9-1924.  
Donkey Boiler Fee ... £ : : When received.  
Travelling Expenses (if any) £ : : 1924.

Committee's Minute GLASGOW 16 SEP 1924

Assigned + LMC 9.24

CERTIFICATE WRITTEN 17.9.24



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